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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/523,694

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Kazuki Honda

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EXAMINER

LUKS, JEREMY AUSTIN

ART UNIT

PAPER NUMBER

2837

MAIL DATE

DELIVERY MODE

01/16/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/523,694

Applicant(s)

HONDA ET AL.

Examiner

Jeremy Luks

Art Unit

2837

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 November 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 15-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 15-28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application
- ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 15-19, 22-25 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Czerwinski (2003/0068064) in view of Honda (JP 05103395 A). Czerwinski teaches a suspension device (Figures 1 and 2, #15) for spanning between an inner member (17) and an outer member (16) arranged outwardly of the inner member (17), said suspension device (15) comprising: a plurality of roll sections (30) configured to span between the inner member (17) and the outer member (16) and being arranged in a loop; and a plurality of boundary sections (area between sections #30, Page 5, [0041, [0044]]), each of said boundary sections (area between sections #30) being arranged between an adjacent pair of said roll sections (30), such that said roll sections (30) and said boundary sections (area between sections #30) are arranged so as to form a continuously alternating pattern of said roll sections (30) and said boundary sections (area between sections #30), wherein the continuously alternating pattern of said roll sections (30) and said boundary sections (area between sections #30) forms a continuous closed loop having a continuous surface, wherein each of said roll sections (30) includes an inner-connecting edge (could be the inner edge of #30) configured to connect to the inner member (17) and an outer-connecting edge (could be

the outer edge of 30) configured to connect to the outer member (16), wherein said roll sections (30) are circumferentially arranged in a continuous closed loop, wherein each of said roll sections (30) constitutes a semi-cylindrical curved surface spanning from said inner-connecting edge to said outer-connecting edge, wherein said roll sections (30) are arranged at regular intervals; further comprising: a frame attaching part (16) connected to a continuous outer loop formed by said outer-connecting edges (outer member 16 is formed by an outer edge of #30) of said roll sections (30), said frame attaching part (16) being configured to connect to a frame (11), wherein any non-continuous parts of said inner-connecting edges of said roll (30) sections are trimmed; further comprising: a vibration system attaching part (17) connected to a continuous inner loop formed by said inner-connecting edges (inner member #17 is formed by an outer edge of #30) of said roll sections (30), said vibration system attaching part (17) being configured to connect to an outer peripheral part (19) of a diaphragm (18) coupled with a voice coil (24), wherein any non-continuous parts of said outer-connecting edges of said roll sections (30) are trimmed; and said frame attaching part (16) for supporting a magnetic circuit and a vibration system (Page 5, [0041]).

Czerwinski fails to teach wherein an odd number of the roll sections are disposed; wherein for each of said roll sections, at least one of said inner-connecting edge and said outer-connecting edge constitutes a straight edge; said straight edges of said roll sections together forming the continuous closed loop. Honda teaches wherein for each of said roll sections (Figure 2, #12) when used in combination, at least one of said inner-connecting edge (15) and said outer-connecting edge (13) constitutes a straight edge;

said straight edges (13 or 15) of said roll sections (12) together forming the continuous closed loop when used in combination. It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the apparatus of Czerwinski, with the apparatus of Honda to provide a loudspeaker surround having sufficient linearity, resulting in less distortion in the lower frequencies. Further, it would have been an obvious matter of design choice to employ an odd number of roll sections, since it has been held that mere duplication of the essential working parts of a device involves only routine skill in the art. *St. Regis Paper Co. v. Bemis Co.*, 193 USPQ 8.

2. Claims 20, 21, 26 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Czerwinski (2003/0068064) in view of Honda (JP 05103395 A) as applied to claims 15 and 16 above, and further in view of Saiki (6,208,237). Czerwinski and Honda are relied upon for the reasons and disclosure set forth above. Czerwinski and Honda fail to teach first and second suspension devices arranged in a covering relation with respect to each other; and wherein the first and second suspension devices are circumferentially offset relative to one another by $1/2$ of a width of one of said roll sections. Saiki teaches first and second suspension devices (Figure 14-16, # 63 and 64) arranged in a covering relation with respect to each other; wherein the first and second suspension devices (63 and 64) are circumferentially offset relative to one another (Col. 15, Lines 7-11). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the apparatus of Czerwinski as modified, with the apparatus of Saiki to ensure that the moving parts vibrate stably. It would have been obvious to one of ordinary skill in the art at the time the invention was made to

rotate the suspension by 1/2 of a width of the roll section, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or working range involves only routine skill in the art. In re Aller, 105 USPQ 233. Further, it has been held that rearranging parts of an invention involves only routine skill in the art. In re Japikse, 86 USPQ 70.

Response to Arguments

3. Applicant's arguments with respect to claims 15-28 have been considered but are moot in view of the new ground(s) of rejection. The Examiner considers the obvious combination of Czerwinski, Honda and Saiki to teach all of the limitations as claimed by Applicant.

4. With respect to Applicant's definition of an edge, the Examiner notes that the definition provided is one of many, and an edge does not necessarily have to be a line. Princeton University's Wordnet (<http://wordnet.princeton.edu/perl/webwn?s=edge>) also defines an edge as *a border (the boundary of a surface)*. The Examiner considers where members #16 and #17 meet element #30 in the Czerwinski reference to be a boundary or border.

Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeremy Luks whose telephone number is (571) 272-

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2707. The examiner can normally be reached on Monday-Thursday 8:30-6:00, and alternating Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lincoln Donovan can be reached on (571) 272-1988. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Jeremy Luks
Patent Examiner
Art Unit 2837
Class 181



LINCOLN DONOVAN
SUPERVISORY PATENT EXAMINER